



Atty. Dkt. No. 024536-0130

**THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Isamu IIZUKA et al.

Title: APPARATUS AND METHOD FOR ESTIMATING RESIDUAL GAS AMOUNT OF INTERNAL COMBUSTION ENGINE, AND APPARATUS AND METHOD FOR CONTROLLING INTAKE AIR AMOUNT OF INTERNAL COMBUSTION ENGINE USING ESTIMATED RESIDUAL GAS AMOUNT

Appl. No.: 10/617,723

Filing Date: 07/14/2003

Examiner: Johnny H. Hoang

Art Unit: 3747

**INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 CFR §1.56**

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Submitted herewith on Form PTO/SB/08 is a listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR §1.56.

A copy of each non-U.S. patent document and each non-patent document is being submitted to comply with the provisions of 37 CFR §1.97 and §1.98.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* art reference against the claims of the present application.

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### **TIMING OF THE DISCLOSURE**

The listed documents are being submitted in compliance with 37 CFR §1.97(c), before the mailing date of either a final action under 37 CFR §1.113, a notice of allowance under 37 CFR §1.311, or an action that otherwise closes prosecution in the application.

### **RELEVANCE OF EACH DOCUMENT**

In a counterpart German application, a German Office Action issued on November 12, 2004. According to an English translation of the German Office Action obtained by Applicants' representative, the German Patent Office made certain characterizations of the references.

According to an English translation of the German Office Action, document B2 (see particularly page 1, paragraph 1), describes a variable valve mechanism for an internal combustion engine. Moreover, it is known from document B2 (see particularly page 1) that when controlling the variable valve mechanism the most different parameters, such as amongst others the intake air quantity and similar parameters are taken into consideration. Moreover, document B2 describes (see particularly page 1, paragraph 1) that even the mixture of intake and outlet gases and the ejection of unburnt fuel through the exhaust pipe is taken into consideration for the control.

According to an English translation of the German Office Action, document B4 (see particularly column 2, 2<sup>nd</sup> paragraph) in addition to document B2 that the torque can also be taken into consideration as parameter.

As noted, the characterizations of the German Patent Office noted above are based on an English translation obtained by Applicant's representative. The disclosure of these characterizations should not be construed as an admission of or agreement with the opinions expressed in the German Office Action.

Documents B1 and B4 belong to the same “patent family,” whereby the English language document may assist the PTO in understanding the content of the non-English language document.

Documents B2 and B3 belong to the same “patent family,” whereby the English language document may assist the PTO in understanding the content of the non-English language document.

Unless otherwise indicated, no English translation is readily available (not considering machine-generated translations that may be freely available online, to both the Applicant(s) and the PTO) for each of the non-English language documents. However, a commercially available English language abstract is provided herewith, where indicated on the attached Form PTO/SB/08. Inasmuch as Applicant(s) has endeavored to provide at least one item that complies with the requirement for a “concise explanation of relevance” for each of the non-English language documents, each of these documents has been submitted in compliance with the PTO requirements and should be considered by the Examiner (37 CFR §1.97, §1.98 and MPEP §609).

Applicants respectfully request that each listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

**FEE**

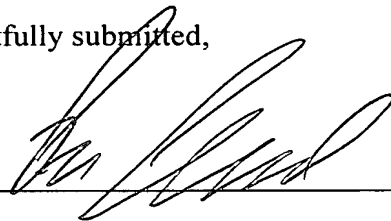
A fee in connection with submission of an information disclosure statement under 37 CFR §1.97(c) in the amount of \$180.00 in accordance with 37 CFR §1.17(p) is attached.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 CFR §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or

even entirely missing, the Commissioner is authorized to charge the unpaid amount to  
Deposit Account No. 19-0741.

Respectfully submitted,

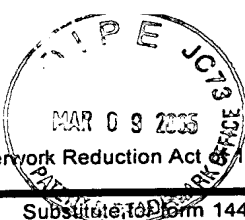
By

A handwritten signature in black ink, appearing to read 'P. Agarwal', is written over a horizontal line.

Pavan K. Agarwal  
Attorney for Applicant  
Registration No. 40,888

Date: March 9, 2005

FOLEY & LARDNER LLP  
Customer Number: 22428  
Telephone: (202) 945-6162  
Facsimile: (202) 672-5399



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Substitute Form 1449B/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> Date Submitted: March 9, 2005 (use as many sheets as necessary)		<b>Complete if Known</b>	
		Application Number	10/617,723
Sheet	1	of	1
		Filing Date	07/14/2003
		First Named Inventor	Isamu IIZUKA
		Group Art Unit	3747
		Examiner Name	Johnny H. Hoang
		Attorney Docket Number	024536-0130

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
	B1	5,074,260		YAGI et al.	12-24-1991	

FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Documents	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				
	B2	DE	195 81 459	T1	STEPHEN KEITH MADDEN	02-27-1997		
	B3	WO	95/18917	A1	STEPHEN KEITH MADDEN	07-13-1995		
	B4	DE	40 13 633	C2	SHIZUO YAGI et al.	10-31-1990		Abs.

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>6</sup>

Examiner Signature		Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

<sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.